KRAMER ELECTRONICS LTD.

USER MANUAL

MODEL:

VP-506
DVI/UXGA Scan Converter

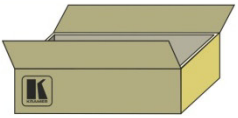
P/N: 2900-300098 Rev 4

VP-506 Quick Start Guide

This page guides you through a basic installation and first-time use of your **VP-506**.
For more detailed information, see the **VP-506** User Manual.
You can download the latest manual at http://www.kramerelectronics.com.

Step 1: Check what's in the box

- **VP-506** DVI/UXGA Scan Converter
- 1 Power supply (5V DC)
- 4 Rubber feet
- 1 Quick Start sheet
- 1 User Manual



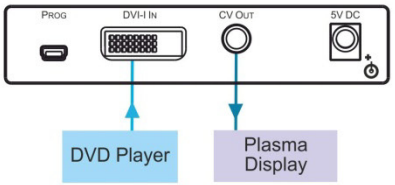
Save the original box and packaging in case your **VP-506** needs to be returned to the factory for service.

Step 2: Install the VP-506

Mount the machine in a rack (using the RK-1 rack adapter) or place on a table.

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your **VP-506**.



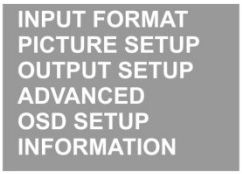
Always use Kramer high-performance cables for connecting AV equipment to the **VP-506.**

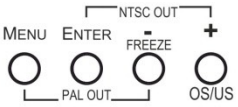
Step 4: Connect the power

Connect the 5V DC power adapter to the **VP-506** and plug the adapter into the mains electricity.

Step 5: Operate the VP-506

Set the parameters using the OSD and the front panel buttons.





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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters and GROUP 11: Sierra Video Products.

Congratulations on purchasing your Kramer **VP-506** *DVI/UXGA Scan Converter*, which is ideal for the following typical applications:

- Multimedia, board rooms, and video conferencing
- Any application where high-quality conversion of DVI data signals to video signals is required

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high-performance, high-resolution cables

Go to http://www.kramerelectronics.com to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Do not secure the cables in tight bundles or roll the slack into tight coils
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **VP-506** away from moisture, excessive sunlight and dust

Caution: No operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

3 Overview

The Kramer **VP-506** is a high-quality scan converter for down-scaling computer graphics (VGA up to UXGA) to PAL or NTSC video. It supports VGA up to UXGA, as well as the HD resolutions: 480p, 576p, 720p and 1080p.

The **VP-506** features:

- User-friendly front panel buttons for easy control of ProcAmp functions, flicker-reduction, image optimization, one-touch freezing, overscanning and underscanning
- Memory locations to save and recall up to four setups, including picture setup, input setup and output setup, zoom and advanced features
  Brightness, contrast, saturation and flicker filter.
- High-quality composite video
- Selectable video standard (PAL or NTSC)
- An external 5V DC source

3.1 Defining the VP-506 DVI/UXGA Scan Converter

This section defines the **VP-506**.

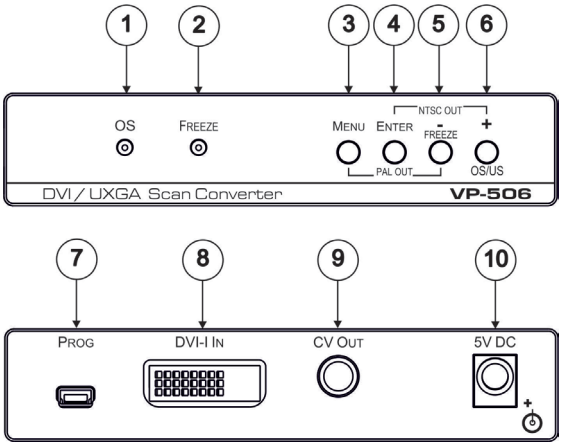

Figure 1: VP-506 DVI/UXGA Scan Converter

#	Feature	Function
1	*OS* LED	Lights when the image is overscanned The displayed image, when set correctly, is larger than the screen
2	*FREEZE* LED	Lights when the FREEZE button is pressed
3	*MENU* Button	Press to enter/escape the on-screen display (OSD) menu. Press together with the – button to reset to PAL output
4	*ENTER / PAL OUT* Button	In OSD, press to choose the highlighted menu item. Press together with the + button to reset to NTSC output
5	*- / FREEZE/ NTSC OUT* Button	In OSD, press to move backward through the list or to decrement the parameter value. When not in OSD, press to freeze the display
6	*+ / OS/US* Button	Press + to scroll up the menu; press OS/US to toggle between overscan and underscan
7	*PROG* USB Connector	Connects to a computer for upgrading the firmware
8	*DVI IN* Connector	Connects to the computer graphics source
9	*CV OUT* RCA Connector	Connects to the composite video acceptor
10	*5V DC*	+5V DC connector for powering the unit

4 Connecting the VP-506

Always switch off the power to each device before connecting it to your **VP-506**. After connecting your **VP-506**, connect its power and then switch on the power to each device.

To connect your **VP-506** as the example in Figure 2 illustrates, do the following:

1. Connect a DVI or VGA source to the DVI-I IN connector (for example, a PC graphics card).
2. Connect the CV OUT RCA connector to the CV acceptor (for example, an LCD display with speakers)**.**
3. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity.
4. Adjust the scan converter features if required (see Section 5.3).

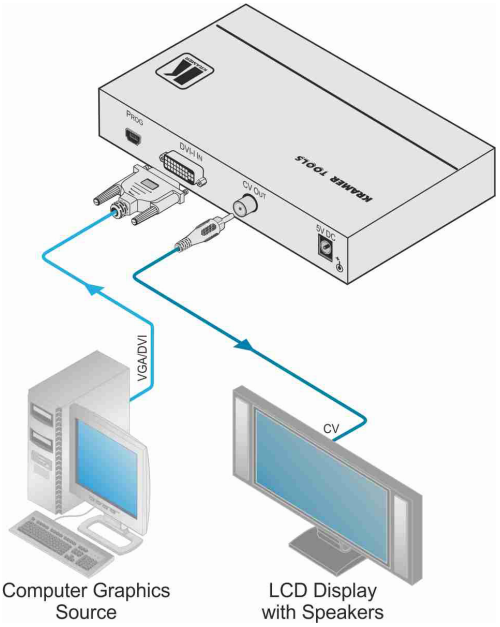

Figure 2: Connecting the VP-506 DVI/UXGA Scan Converter

5 Operating the VP-506

You can operate your **VP-506** via the front panel buttons, which are dual-purpose buttons (except for the MENU button) that function as:

- Quick-set buttons: FREEZE and OS/US; or
- Menu buttons: MENU, ENTER, – and +

This section describes how to:

- Use the quick set buttons (see Section 5.1)
- Use the set of menu buttons (see Section 5.2)
- Use the Menu screen (see Section 5.3)
- Use the test patterns (see Section 5.4)
- Save and recall (see Section 5.5)

5.1 Using the Quick-Set Buttons

The following sub-sections describe the **VP-506** quick set buttons.

5.1.1 Using the FREEZE Button

Press the FREEZE button to freeze the picture on the screen. The frozen picture is displayed regardless of the signal on the input to the unit. This allows you, for example, to change the programs on the PC, and set up the next image.

By pressing the FREEZE button again, the frozen image will be replaced by the most current image on the input to the unit.

5.1.2 Using the OS/US Button

Press the OS/US button to toggle between overscan and underscan:

- Overscan generally has no border and the displayed image is usually larger than the screen

  This makes the data bigger and easier to read with the possibility of having some of it run off the edge of the screen.

- Underscan (sometimes know as compress mode) generally leaves a border around the image

  The image appears reduced in size with a margin around it so that none of the data gets lost.

Overscan

Underscan

Figure 3: Overscanned and Underscanned images

5.2 Adjusting the Display via the Menu Buttons

The menu buttons (MENU, ENTER, – and +) let you adjust the screen settings. Use the menu buttons as follows:

- Press the MENU button to display the menu on the screen

  Pressing the MENU button disables the quick-set buttons (FREEZE and OS/US)
- Press the MENU button again each time you want to return to the previous menu level or exit the menu
- Press the + or - buttons to move up or down the menu respectively
- Press ENTER to accept changes
- Before exiting the menu, you can save settings (see Section 5.5.1)

5.3 Using the Menu

Using the main menu, you can adjust the screen display (screen adjustments apply to both CV and Y/C displays). After pressing the MENU button (quick-set buttons are disabled), the main Menu appears on the screen. Use the menu buttons to scroll through the menu and make the required adjustments. The following table defines the menu items.

The menu times-out after 20 seconds of inactivity.

Item	Selections	Parameter	Default
INPUT FORMAT	DVI / PC / YPBPR		DVI
PICTURE SETUP	CONTRAST	0-255	128
	BRIGHTNESS	0-255	128
	SATURATION	0-255	128
	SHARPNESS	0-255	128
	PHASE	0-31	16
OUTPUT SETUP	H-POSITION	–50 to +50	0
	V-POSITION	–29 to +29 (depends on timing mode)	0
	SIZE	100%, 90%, 95%, 105%, 110%, 115%	100%
ADVANCED	TEST_PATTERN	OFF,WHITE,CROSS,CROSS HATCH,COLOR BAR, GRAY SCALE,WHITE WINDOW, RED, GREEN, BLUE	OFF
	NO_INPUT	WHITE,CROSS,CROSS HATCH,COLOR BAR, GRAY SCALE,WHITE WINDOW, RED, GREEN, BLUE	BLUE
	SAVE	0-3	0
	RECALL	0-3	0
	FACTORY_RESET		
OSD SETUP	OSD_HPOSITION	0-100	15
	OSD_VPOSITION	0-100	5
	OSD_TIMEOUT	0-100	15
	OSD_TRANSPARENCY	0-15	15
INFORMATION	SOURCE	DVI or PC or YPbPr	
	TIMING	Shows input resolution (e.g.1024X768@60)	
	OUTPUT	NTSC or PAL	
	VERSION	Shows firmware version (e.g. V1.01)	

5.4 Using Test Patterns

The Advanced menu lets you select Test Patterns and Save and Recall setups.

The **VP-506** stores nine test patterns. From the Advanced menu, you can select a test pattern (from 1 to 7) to show on screen. Figure 4 shows test pattern number 1.

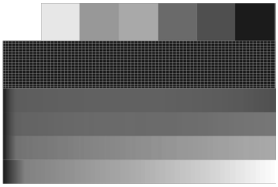

Figure 4: Test Pattern Number 1

You can also set a test pattern to appear on the screen when there is no input connected to the **VP-506**. To do so, enter the Advanced menu, select **No Input** and set a test pattern number. This test pattern will appear when there is no input connected. For example, set **No Input** to **1** if you want test pattern 1 (as in Figure 4) to appear when there is no input connected to the unit.

5.5 Saving and Recalling

The **VP-506** lets you save and recall up to four setups (from 0 to 3).

The Save mode stores all the menu settings in one of the Save setup numbers.

The Save mode saves the Picture setup, the TV Output setup, the VGA Input Setup, the Zoom setup, and the advanced setup (test patterns)

Saving Through the Advanced Menu

To save setup 1, for example:

1. Adjust the Picture Setup, the VGA Input Setup, the TV Output Setup, the Zoom and panning, and the No Input number.
2. In the Advanced menu, select **Save** and set to number **1**.
3. Press **ENTER**.
   The setup is saved.

When disconnecting the unit, the setup that was saved last is stored and reappears when reconnecting the unit.

Consider the following sequence, for example:

- A certain setup is saved to 1
- A different setup is saved to 2
- Setup 1 is recalled
- The unit is disconnected
- The unit is reconnected
- Setup 2 appears (since it was saved last)

5.5.1 Saving When Exiting the Menu

Whenever a change in the setup is performed, you are prompted to save the changes, be it recalling a different setup, or changing the Zoom mode:

The Save Setting item does not timeout, it remains until No or Yes is selected.

- Select **No** to cancel setup changes
- Select **Yes** to save setup changes.
  Changes are saved to the setup number currently appearing next to the Save item

  Note that your setup is saved to one of the 4 setups and overwrites the previous setup associated with this setup number.

5.5.2 Recalling a Setup

To recall a setup select **Recall** from the advanced menu and select the setup number you want to recall.

6 Technical Specifications

INPUT:	1 x DVI-I (DVI-D, VGA, YPbPr) on a 24-pin Molex connector
OUTPUT:	1 composite video 1Vpp/75Ω on an RCA connector
INPUT RESOLUTIONS:	Up to WUXGA/1080p
CONTROLS:	Front panel and OSD: ProcAmp video controls, freeze, underscan /overscan, 8 color bars
POWER CONSUMPTION:	5V DC, 540mA
OPERATING TEMPERATURE:	0° to +55°C (32° to 131°F)
STORAGE TEMPERATURE:	-45° to +72°C (-49° to 162°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS:	12cm x 7.5cm x 2.5cm (4.7" x 2.95" x 0.98") W, D, H
WEIGHT:	0.3kg (0.67lbs) approx
ACCESSORIES:	Power supply, mounting bracket
OPTIONS:	RK-1 19" rack adapter
Specifications are subject to change without notice at http://www.kramerelectronics.com	

LIMITED WARRANTY

The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below:

What is Covered

This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

How Long Does this Coverage Last

Seven years as of this printing; please check our Web site for the most current and accurate warranty information.

Who is Covered

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

What Kramer Electronics will do

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

What Kramer Electronics will not do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

How to Obtain a Remedy under this Limited Warranty

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at www.kramerelectronics.com or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required. You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

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IF ANY PRODUCT TO WHICH THIS LIMITED WARRANTY APPLIES IS A “CONSUMER PRODUCT” UNDER THE MAGNUSON-MOSS WARRANTY ACT (15 U.S.C.A. §2301, ET SEQ.) OR OTHER APPICABLE LAW, THE FOREGOING DISCLAIMER OF IMPLIED WARRANTIES SHALL NOT APPLY TO YOU, AND ALL IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE PARTICULAR PURPOSE, SHALL APPLY AS PROVIDED UNDER APPLICABLE LAW.

Other Conditions

This limited warranty gives you specific legal rights, and you may have other rights which vary from country to country or state to state.

This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, please visit our Web site at www.kramerelectronics.com or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.
Web site: www.kramerelectronics.com
E-mail: info@kramerel.com

SAFETY WARNING
Disconnect the unit from the power supply before opening and servicing

P/N: 2900-300098 Rev: 4